

CLAIMS

1. A construction kit comprising a kit of parts comprising apertured blocks and pegs for joining the blocks together to form a model stadium, outdoor theatre or arena, with terraces around a central area, wherein the kit of parts comprises a baseboard, pegs, four different types of block, and a plurality of panels of stepped cladding which are adapted by protruding pegs to be fitted to a skeleton support structure made up of blocks attached to and rising upwardly and away from a central region of the baseboard, wherein the four different types of block comprise four-element and two-element solid rectilinear blocks, two-element solid regular trapezoidal corner blocks, and infill corner blocks each of which is partly a solid rectilinear shape and partly a solid triangular extension at one end whose overall length is not greater than that of the two-element regular trapezoidal corner block, where an element is considered to be a cube containing one opening centrally of each of its faces and an N-element rectilinear block has a length equal to N elements arranged end to end.
2. A kit as claimed in claim 1 wherein the pegs which protrude from the cladding are adapted to be push fitted into apertures in faces of blocks making up staircase structures which face the said central region.
3. A kit as claimed in claim 2 wherein the infill corner blocks are dimensioned so that two joined end to end with their sloping end faces in contact, will just fit between the end faces of spaced apart rectilinear blocks at the upper outer ends of two adjacent staircase structures in each of which the bottom step is made up of a single two-element solid regular trapezoidal corner block in end to end contact with that at the bottom of the adjacent staircase.

4. A kit as claimed in claim 1, 2 or 3 wherein the edge of each infill block which defines the acute angled corner of the trapezoidal extension thereof is chamfered, so that when two such blocks are fitted with their inclined faces in contact, there is no sharp corner between the two blocks.
5. A kit as claimed in claim 4 wherein the angle of the chamfer is chosen so that the inclined end face has the same rectilinear dimensions as that of the end face of a rectilinear block.
6. A kit as claimed in any of claim 1 to 5 further comprising roofing panels also adapted to be secured to a skeleton roof support structure of blocks by means of pegs.
7. A kit as claimed in claim 6 wherein the pegs are integrally formed with the roofing panels.
8. A kit as claimed in claim 6 or 7 wherein the roofing panels are clear.
9. A kit as claimed in claim 6 or 7 wherein the roofing panels are coloured.
10. A kit as claimed in any of claims 6 - 9 wherein the surface of the roofing panels is embossed to resemble roofing.
11. A kit as claimed in any of claims 6 to 10 wherein the roofing panels are generally flat or shaped or curved.
12. A kit as claimed in any of claims 6 to 11 wherein the roofing panels are provided with openings which register with holes in blocks making up the roof support structure so that they can be pegged to the blocks.

13. A kit as claimed in any of claims 1 - 12 further comprising a hinge for hingedly joining two blocks together comprising a rectangular plastics plate divided into two parts by a strip hinge formed by a linear region of reduced thickness extending across the plate, whereby one part can be pivoted through at least 90° relative to the other by bending about the line of the strip hinge and wherein each half includes at least one peg protruding therefrom by which it can be fitted to one of the blocks.

14. A kit as claimed in claim 13 wherein each peg is constructed so as to be a push fit in any of the openings in any of the apertured blocks.

15. A kit as claimed in claim 13 or 14 wherein the two pegs extend from the same face of the plate when the two parts of the latter are coplanar.

16. A kit as claimed in any of claims 13 to 15 wherein the strip hinge permits the two parts of the plate to be hinged until they are back to back and in contact, so that if blocks are secured to the pegs protruding from the two back to back parts, the two blocks will be in linear alignment in opposite directions on either side of the folded plate, spaced apart by the thickness of the two back to back parts.

17. A kit as claimed in any of claims 13 to 16 wherein a plurality of pegs protrude from one of the parts whereby two or more blocks can be secured thereto.

18. A kit as claimed in claim 17 wherein the other plate also has a plurality of pegs protruding therefrom whereby two or more blocks can be secured to both of the hinged parts.

19. A kit as claimed in claim 17 or 18 wherein the spacing of the pegs corresponds to the spacing of the peg receiving apertures in the blocks, whereby a part having two protruding pegs can be fitted to two adjacent apertures in one block, or to two blocks arranged end to end or side by side with one peg fitted into an aperture in one of the blocks and the other peg fitted into an aperture in the other.

20. A kit as claimed in any of claims 13 to 19 wherein the or each hinge is constructed so as to have two similar sized plates.

21. A kit as claimed in any of claims 1 to 20 in which, in use, blocks are to be spaced apart in the same way as bricks are spaced by mortar joints, wherein each of at least some of the individual pegs includes a flange at a position intermediate its ends, the thickness of the flange determining the spacing which will exist between two opposed faces of two blocks joined by inserting one end of the peg into an opening in one block and the other end of the peg into an opening in the other block.

22. A kit as claimed in claim 21 wherein the flange is located midway between the ends of the peg.

23. A kit as claimed in claim 22 wherein the flange is rectangular or square.

24. A kit as claimed in claim 23 wherein the dimensions of the flange are such that when fitted between two similar blocks the edges of the flange are stepped back relative to the corresponding edges of the two blocks, so as to resemble a mortar joint between two bricks.

25. A kit as claimed in any of claims 21 to 24 wherein the flange is formed integrally with the peg.

26. A kit as claimed in any of claims 21 to 24 wherein the flange is separate from a peg and is apertured to allow it to be push fitted onto a peg.

27. A kit as claimed in any of claims 21 to 24 wherein the flange is separate from peg and has a slotted aperture therein through which a peg can be pushed, so that relative movement is possible between the peg and the flange, whereby in use a peg can be inserted

into any one of two or more openings in a block face, and the flange can be slid relative, to the block, so as to be aligned therewith.

28. A kit as claimed in any of claims 1 to 20 in which each of at least some of the pegs includes a radial protrusion or a flange which extends around some or all of the perimeter of the peg cross section at one position along its length, for the purpose of limiting the depth to which the peg can be inserted into an opening in a block.

29. A kit as claimed in claim 28 wherein the radial protrusion or flange is located midway of the length of the peg, so that approximately one half the length of a peg is available to protrude into the two apertures in two blocks it is to join, or into a block and a baseboard to which the block is to be secured by the peg.

30. A kit as claimed in claim 28 or 29 wherein a recess or rebate is formed around the entrance to each aperture in each of at least some of the blocks, to accommodate at least one half the thickness of any protrusion or flange, so that when two blocks are located face to face the recesses or rebates align to form cavities between the abutting faces of the two blocks which will accommodate any such protrusion or flange, and allow the block faces to make contact.

31. A kit as claimed in any of claims 1 to 30 wherein each of at least some of the pegs is cylindrical, and the cylindrical wall is cutaway along the length of the peg to form a gap in the circumference of the peg, which extends from one end of the peg to the other.

32. A kit as claimed in claim 31 wherein the cylindrical peg wall is formed from resiliently deformable material and the outside diameter of the cylindrical form is oversize relative to the apertures in the blocks in which it is to be received, and the act of pushing the peg into an aperture in a block will cause the gap in the cylindrical wall to close up and reduce the overall cross sectional dimension of the peg so that it can slide into the aperture in the block.

33. A kit as claimed in claim 31 wherein the resilience of the peg material tends to hold the peg firmly in place in the aperture, since all the time it is in the block the cylindrical cross section will be reduced and the peg will be trying to enlarge and recover its uncompressed size, and will thereby firmly grip the wall of the aperture.

34. A kit as claimed in claim 32 wherein each said peg is formed from resilient plastics material or from spring steel.

35. A kit as claimed in any of claims 31 to 34 wherein the ends of the pegs are chamfered to facilitate their insertion into apertures in the blocks.

36. A kit as claimed in any of claims 1 to 35 wherein a pair of blocks are to be hinged, and wherein one end of one of the pair of blocks is cut away on two opposite side faces to form a reduced width rebated end region, and one end of the other block of the pair is cutaway to form a bifurcated end having two parallel spaced apart side cheeks between which the rebated end region of the other block can slide, and wherein the rebated and bifurcated end regions are formed with through bores which are axially aligned when the rebated end region of the one block is fitted between the two side cheeks of the bifurcated end region of the other, whereby in use a peg can be pushed therethrough to serve as a pivot member and allow one block to hinge relative to the other.

37. A kit as claimed in claim 36 wherein the diameter of the bore in at least one of the side cheeks is such that a peg is a push fit therein and will be gripped thereby so as not to fall out.

38. A kit as claimed in claim 37 wherein the peg is either a push fit in the bore through the rebated end region so that the two blocks will not freely rotate about the hinge axis but will remain at whatever angle of inclination the two blocks are rotated into, or the peg is a running fit in the bore so that the two blocks are freely hingeable about the hinge axis.

39. A kit as claimed in any of claims 36 to 38 wherein the length of the peg is the same as the width of the bifurcated block so as not to protrude from the ends of the bores in the two side cheeks when fitted thereto.

40. A kit as claimed in any of claims 36 to 38 wherein the length of the peg is greater than the width of the bifurcated block so that at least one end of the peg will protrude from a side cheek to permit it to be push fitted into a through bore or aperture in another adjoining block.

41. A kit as claimed in any of claims 36 to 40 wherein the diameter of the bores in the bifurcated and rebated end regions of the two blocks is commensurate with that of the apertures in the blocks into which pegs are fitted to given blocks the one to the other, so that one peg can be employed for both purposes.

42. A kit as claimed in any of claims 1 to 41 further comprising at least one block whose cross section is a right angled triangle and wherein at least the two faces defining the right angle are provided with openings into which pegs can be push fitted for joining the solid triangular cross section block to another block.

43. A kit as claimed in claim 42 wherein at least one of the two faces defining the right angle of the cross section is dimensioned so as to correspond in size to the end face of a rectilinear block, for fitting thereto.

44. A kit as claimed in claim 42 or 43 wherein the length of the triangular block measured perpendicular to the triangular cross section is equal to the width of one of the rectilinear blocks or to a whole number multiple of that width.

45. A kit as claimed in claim 41 wherein the length of the triangular block measured perpendicular to the triangular cross section is equal to length dimension of a rectilinear block.

46. A kit as claimed in claim 41 wherein the triangular block length is N times the width of a rectilinear block and the faces subtending the right angle are formed with N equally spaced apart apertures the spacing of which is commensurate with that of the spacing of apertures in the faces of the rectilinear blocks.

47. A kit as claimed in claim 41 wherein in use the triangular block is pegged to the end face of a rectilinear block so as to form a solid trapezium.

48. A kit as claimed in any of claims 41 to 47 wherein the inclination of the sloping face of the solid triangular section block to one of the other faces, is 45° , or 30° , or 60° .

49. A model stadium, arena or open air theatre assembly constructed from a kit of parts as claimed in any of claims 1 to 48 wherein stepped cladding panels are located over staircase structures made of stepped columns of blocks joined by pegs, and wherein some of the stepped cladding panels taper from top to bottom to define generally triangular pieces which can be fitted side by side around a corner of the assembly and others of the stepped cladding panels are parallel sided for similarly fitting over staircase structures defining straight sides or ends of the assembly.

50. A model as claimed in claim 49 wherein the blocks forming the staircase structures are joined to each other and to a baseboard by pegs.

51. A model as claimed in claim 50 wherein blocks are joined together to form staircase structures rising upwardly and outwardly from a central region of the baseboard to form a skeleton structure, and wherein each of the stepped cladding panels which are to be fitted thereto to resemble terraces surrounding the central region, includes a plurality of spaced apart pegs protruding from its rear face by which it can be secured to the blocks making up a staircase structure by push fitting the protruding pegs into apertures in the blocks, the cladding serving the dual purpose of structurally supporting the staircase structure and covering the skeleton structure formed thereby so that the sides, corners and ends of the model appear as solid continuous terraces.

52. A model as claimed in claim 51 wherein blocks are positioned between and joined at their ends to blocks making up adjacent staircase structure.
53. A model as claimed in any of claims 49 to 52 wherein the pegs joining the stepped blocks extend horizontally and vertically between blocks.
54. A model as claimed in any of claims 49 - 53 wherein the pegs protruding from the rear and undersides of each cladding panel do so along the rear of the lowermost riser and the underside of the uppermost tread of the cladding panel.
55. A model as claimed in any of claims 49 - 54 wherein the treads of the cladding panels are formed with lines of spaced apart openings having the same pitch as the apertures in the blocks making up the staircase structures.
56. A model as claimed in claim 55 wherein the pegs are hollow cylindrical devices, the openings in the cladding are all of the same diameter which is commensurate with the diameter of the central bore of each of the cylindrical pegs, so that where pegs are inserted into blocks, they will align with the openings in the cladding, when the cladding is fitted thereover.
57. A model as claimed in claim 56 further comprising items such as seats, having pins protruding therebelow by which they can be fitted to the cladding by pushing the pins through the openings in the cladding and into the central bores of pegs in the blocks therebelow, thereby to secure the items in place and to further join the cladding panels to the blocks making up the staircase structures.
58. A model as claimed in claim 57 wherein the pins are a push fit in the central bores of the pegs.

59. A model as claimed in any of claims 49 to 58 wherein the lower end of each of the staircase structures of a corner-defining array is constructed using a two-element solid regular trapezoidal shaped corner block and the lower ends of all the staircase columns are joined using pegs between abutting end faces.

60. A model as claimed in claim 59 wherein a 90° corner is defined by three staircase structures, and each inclined end face of each of the three lowermost blocks in each of the three columns subtends a 15° angle to the length dimension of each such block, so that the first and last of the inclined end faces of these three lowermost blocks subtend a right-angle whereby in use they can be fitted directly to the end faces of rectilinear blocks at the bottom of adjacent staircase structures in side or end runs of the assembly.

61. A model as claimed in any of claims 49 to 60 wherein the uppermost block of each staircase structure is supported by a vertical column of blocks below it and the lowermost block of the vertical column is pegged to the base-board as is also the lowermost block at the bottom of the staircase structure, so as to define with the base-board a right angled triangle of which the staircase is the hypotenuse.

62. A model as claimed in claim 61 wherein a further column of blocks is located below at least one other of the blocks making up the staircase structure.

63. A model as claimed in claim 61 or 62 further comprising a roof structure cantilevered inwardly over at least part of the stepped terraces formed by the cladding.

64. A model as claimed in claim 63 wherein blocks are fitted above the uppermost blocks defining the staircase structures by pegging at least one line of blocks to the uppermost line of blocks around the stadium and between the structures where the latter are spaced apart, to form a roof support wall, and pegging blocks to the uppermost line of blocks of the roof support wall so as to extend inwardly over the terraces at right angles to the support wall.

65. A kit of parts comprising apertured blocks and pegs for joining them together wherein there is provided a hinge for hingedly joining at least two blocks together comprising a rectangular plastics plate divided into two parts by a strip hinge formed by a linear region of reduced thickness extending across the plate, whereby one part can be pivoted through at least 90° relative to the other by bending about the line of the strip hinge and wherein each half includes at least one peg protruding therefrom by which it can be fitted to one of the blocks.

66. A kit of parts comprising apertured blocks and pegs for joining them together and in which blocks are to be spaced apart in the same way as bricks are spaced by mortar joints, wherein each of or least some of the individual pegs include a flange at a position intermediate its ends, the thickness of the flange determining the spacing which will exist between the opposed faces of two blocks joined by inserting one end of the peg into an opening in one block and the other end of the peg into an opening in the other block.

67. A kit of parts comprising apertured blocks and pegs for joining them together wherein each of at least some of the pegs is formed with a radial protrusion or flange which extends around some or all of the perimeter of the peg cross section, for the purpose of limiting the depth to which the peg can be inserted into an opening in a block.

68. A kit as claimed in claim 67 wherein a recess or rebate is formed around the entrance to each aperture in each of at least some of the blocks, to accommodate at least one half the thickness of any protrusion or flange, so that when two blocks are located face to face the recesses or rebates align to form cavities between the abutting faces of the two blocks which will accommodate any such protrusion or flange, and allow the block faces to make contact.

69. A kit of parts comprising apertured blocks and pegs for joining them together wherein each of at least some of the pegs is cylindrical and the cylindrical wall is cutaway along the length of the peg to form a small gap at one point around the circumference of the peg, which extends from one end of the peg to the other.

70. A kit as claimed in claim 69 wherein the cylindrical peg wall is formed from resiliently deformable material and the outside diameter of the cylindrical form is oversize relative to the apertures in the blocks in which it is to be received, and the act of pushing the peg into an aperture in a block will cause the gap in the cylindrical wall to close up and reduce the overall cross sectional dimension of the peg so that it can slide into the aperture in the block.

71. A kit of parts comprising apertured blocks and pegs for joining them together wherein a pair of blocks are to be hinged, and wherein one end of one of the pair of blocks is cut away on two opposite side faces to form a reduced width rebated end region, and one end of the other block of the pair is cutaway to form a bifurcated end having two parallel spaced apart side cheeks between which the rebated end region of the other block can slide, and wherein the rebated and bifurcated end regions are formed with through bores which are axially aligned when the rebated end region of the one block is fitted between the two side cheeks of the bifurcated end region of the other, whereby in use a peg can be pushed therethrough to serve as a pivot member and allow one block to hinge relative to the other.

72. A kit of parts comprising apertured blocks and pegs for joining them together further comprising at least one block whose cross section is a right angled triangle and wherein at least the two faces defining the right angle are provided with openings into which pegs can be push fitted for joining the solid triangular cross section block to another block.

73. A model stadium, arena or open air theatre assembly constructed from a kit of parts comprised of a baseboard, apertured blocks and pegs by which the blocks are joined to each other and to the baseboard wherein stepped cladding panels are located over staircase structures made of stepped columns of blocks, and wherein some of the stepped cladding panels taper from top to bottom to define generally triangular pieces which can be fitted side by side around a corner of the assembly and others of the stepped cladding panels are

parallel sided for similarly fitting over staircase structures defining straight sides or ends of the assembly.

74. A model as claimed in claim 73 wherein each of the stepped cladding panels which are to be fitted thereto to resemble terraces surrounding the central region, includes a plurality of spaced apart pegs protruding from its rear face by which it can be secured to the blocks making up a staircase structure by push fitting the protruding pegs into apertures in the blocks, the cladding serving the dual purpose of structurally supporting the staircase structure and covering the skeleton structure formed thereby so that the sides, corners and ends of the model appear as solid continuous terraces.

75. A model as claimed in any of claim 73 or 74 wherein the treads of the cladding panels are formed with lines of spaced apart openings having the same pitch as the apertures in the blocks making up the staircase structures.

76. A model as claim in claim 75 wherein the pegs are hollow cylindrical devices, the openings in the cladding are all of the same diameter which is commensurate with the diameter of the central bore of each of the cylindrical pegs, so that where pegs are inserted into blocks, they will align with the openings in the cladding, when the cladding is fitted thereover.

77. A model as claimed in claim 76 further comprising items such as seats, having pins protruding therebelow by which they can be fitted to the cladding by pushing the pins through the openings in the cladding and into the central bores of pegs in the blocks therebelow, thereby to secure the items in place and to further join the cladding panels to the blocks making up the staircase structures.

78. A model as claimed in claim 77 wherein the pins are a push fit in the central bores of the pegs.